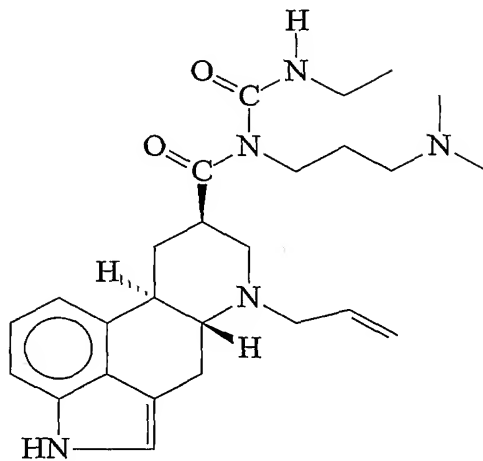


CLAIMS:

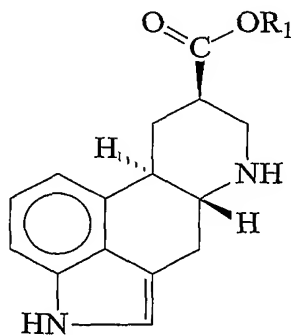
1. A process for preparing cabergoline (I)



cabergoline (I)

- 5 comprising the following steps:

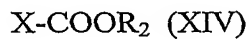
- (a) reacting the compound of formula (XIII)



(XIII)

wherein R_1 is a C_{1-4} alkyl group, in the presence of a catalyst

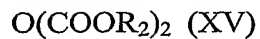
- 10 (i) with a compound of formula (XIV),



wherein R_2 is an optionally substituted straight or branched C_{1-6} alkyl group,

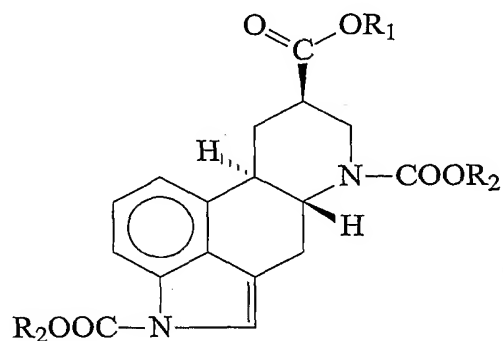
X represents a bromine or chlorine atom, or

(ii) with a compound of formula (XV),



wherein R_2 is a group as defined above for formula (XIV);

5 (b) reacting the obtained carbamate derivative of formula (XVI)

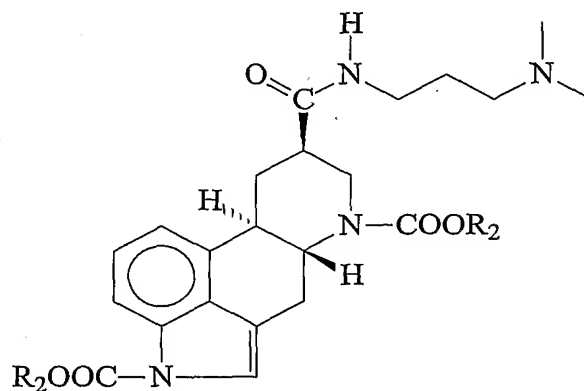


(XVI)

wherein R_1 and R_2 is a group as defined above, with 3-(dimethylamino)propylamine in the presence of a catalyst;

10

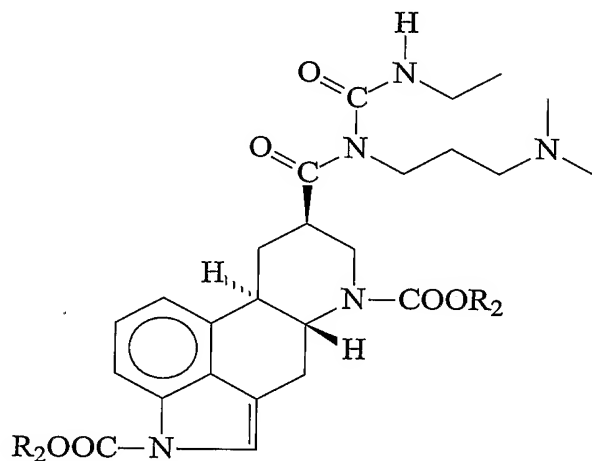
(c) reacting the obtained ergoline-8 β -carboxamide derivative of formula (XVII)



(XVII)

wherein R_2 is a group as defined above, with ethyl isocyanate in the presence of ligand(s) and Ib and IIb metal group salt catalyst;

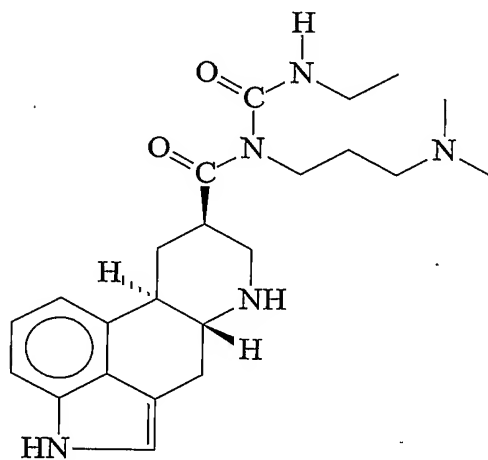
- (d) reacting the obtained protected N-acylurea derivative of formula (XVIII)



(XVIII)

wherein R_2 is a group as defined above, with a strong aqueous inorganic acid;

- (e) reacting the obtained secondary amine of formula (XIX)



(XIX)

with an electrophyl allyl alcohol derivative in the presence of a palladium or nickel containing catalyst and optionally in the presence of ligand(s) to form cabergoline (I).

2. A process according to claim 1 wherein R₁ is methyl and R₂ is *tert*-butyl.

5

3. A process according to any of claims 1 to 2 wherein step (a) is carried out at a temperature of from 0°C to 50°C in the presence of 4-dimethylaminopyridine catalyst in a hydrocarbon halide solvent.

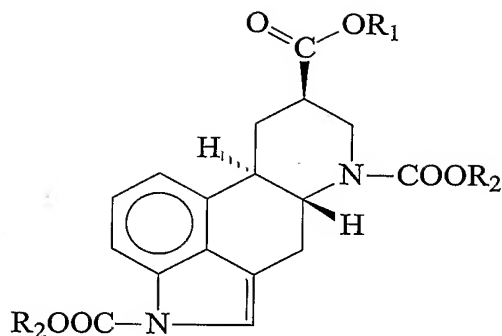
10 4. A process according to any of claims 1 to 2 wherein step (b) is carried out at a temperature of from 50°C to 70°C in an C₁₋₆ alkyl alcohol solvent in the presence of 2-hydroxypyridine catalyst.

15 5. A process according to any of claims 1 to 2 wherein step (c) is carried out in hydrocarbon halide solvent, in the presence of copper(I) chloride and/or copper(II) chloride and/or copper(I) bromide and/or copper(I) iodide catalysts and triphenylphosphine or tri-*p*-tolylphosphine ligand at a temperature of from 30°C to 50°C.

20 6. A process according to any of claims 1 to 2 wherein step (d) is carried out at a temperature of from 40°C to 80°C in aqueous hydrochloric acid.

25 7. A process according to any of claims 1 to 2 wherein at step (e) the electrophyl allyl alcohol derivative is allyl acetate, the catalyst is tetrakis(triphenylphosphine)palladium(0), and the reaction is carried out in an aromatic hydrocarbon solvent at a temperature of from 20°C to 50°C.

8. Compounds of formula (XVI)

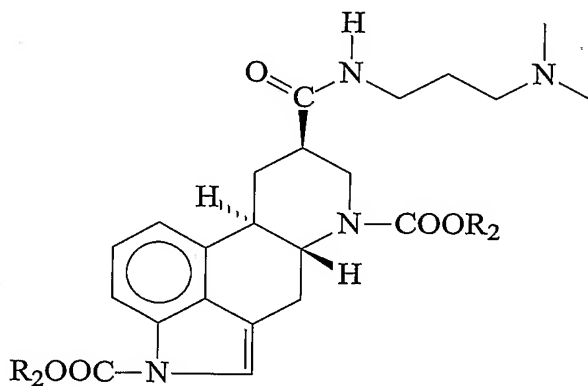


(XVI)

5 wherein R_1 represents a C_{1-4} alkyl group and R_2 represents an optionally substituted C_{1-6} alkyl group.

9. Compound according to claim 8 wherein R_1 is methyl and R_2 is *tert*-butyl.

10. 10. Compound of formula (XVII)



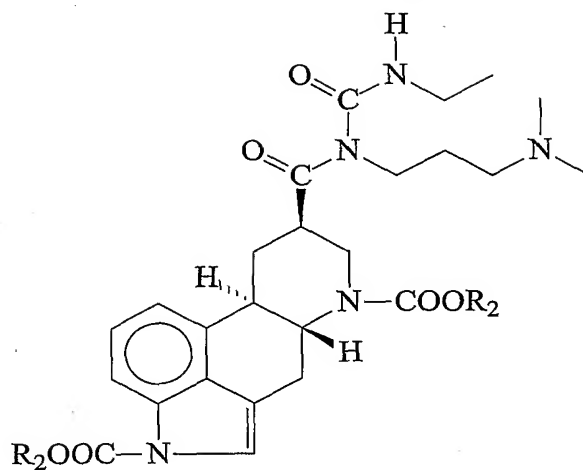
(XVII)

wherein R_2 represents an optionally substituted C_{1-6} alkyl group.

15 11. Compound according to claim 10 wherein R_2 is *tert*-butyl.

29

12. Compounds of formula (XVIII)



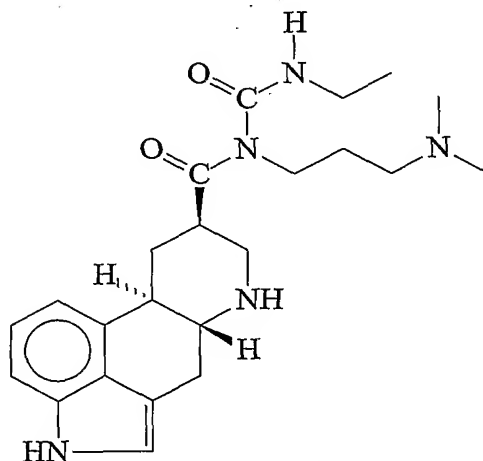
(XVIII)

wherein R₂ represents an optionally substituted C₁₋₆ alkyl group.

5

13. Compound according to claim 12 wherein R₂ is *tert*-butyl.

14. Compound of formula (XIX)



(XIX)

10

15. The polymorphic amorphous form of Cabergoline (I).

16. Process for the preparation of the polymorphic amorphous form of Cabergoline (I) wherein the chromatographically purified oily Cabergoline (I) is dissolved in a suitable organic solvent and from the obtained solution the solvent is partially removed several times
5 in vacuum at a temperature of from 0°C to 30°C, until not oily but solid product is obtained.

17. A process according to claim 16 wherein the solvent is acetone, methyl acetate or dichloromethane.